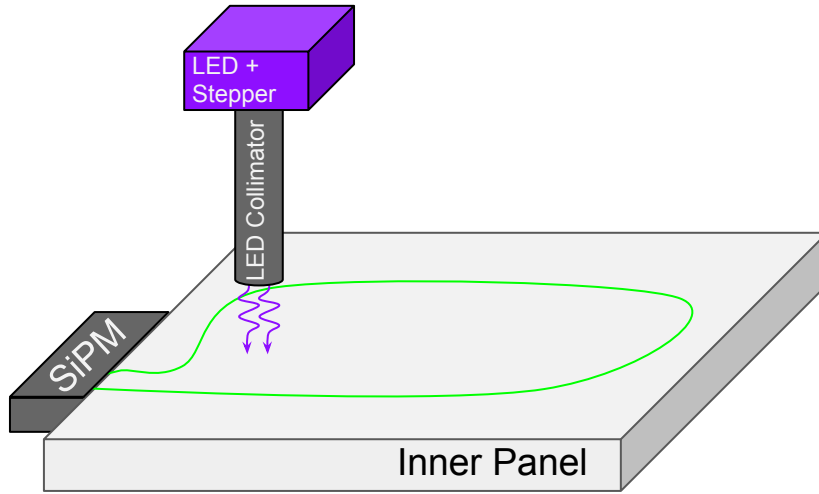


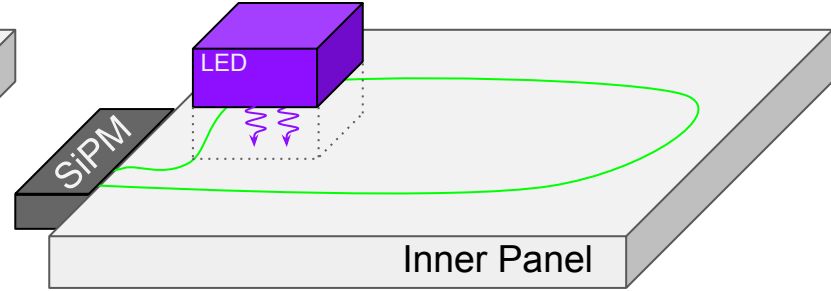
Pre-Amp Extended Low Gain Scan

Sebastian Vazquez-Carson

Old SetUp



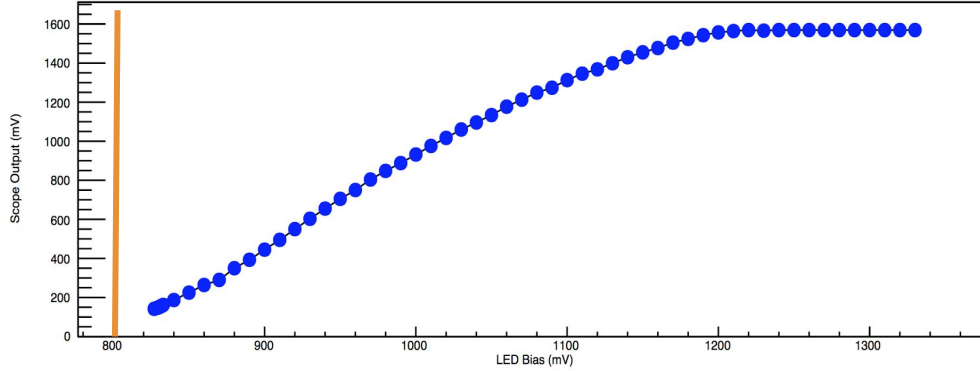
New Set-Up



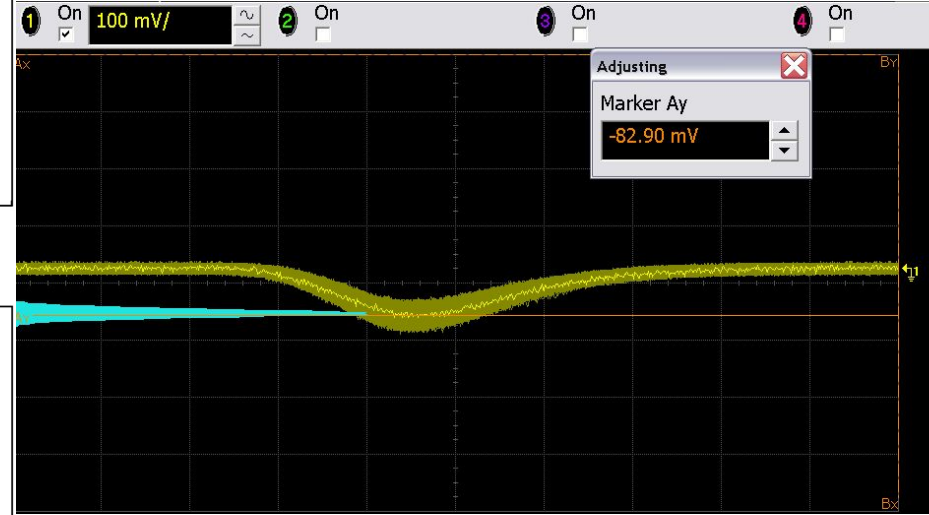
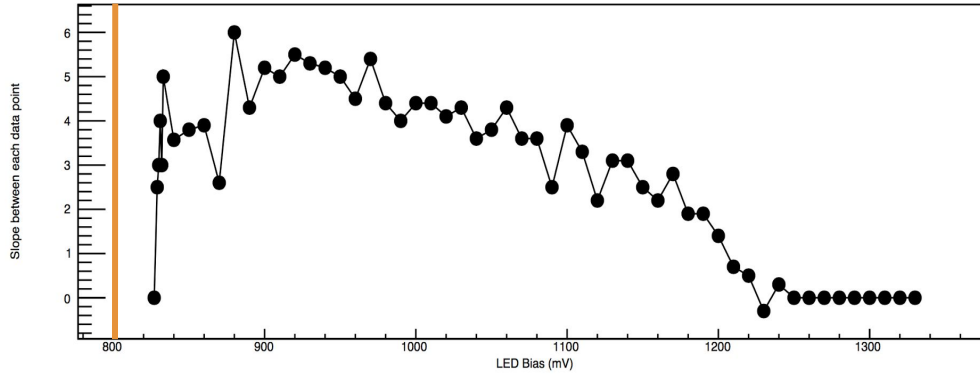
- This new setup is different from the old set up because now the led is much closer to the panel (~0cm vs ~15cm)
- This allows us to saturate the preamp with only one LED as opposed to an array of LED's

Low Gain: 800 mV

Extended Low Gain: LED Bias vs Scope Output

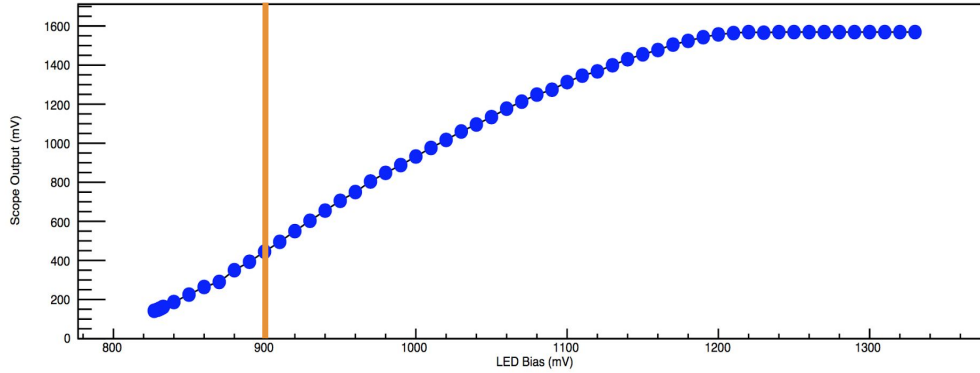


Scope Output Rate of Increase Per Step in VBias

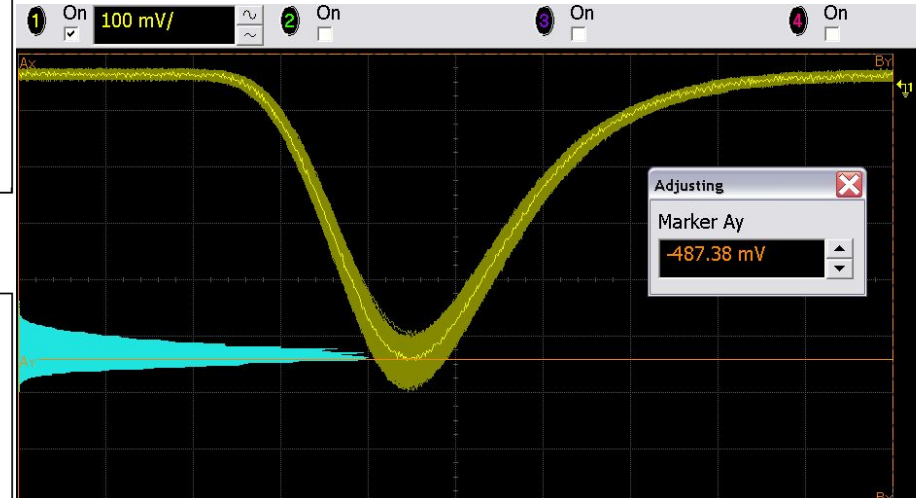
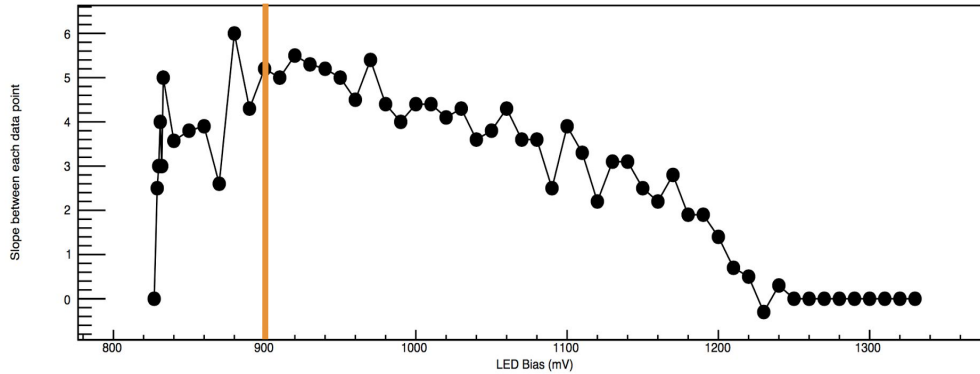


Low Gain: 900 mV

Extended Low Gain: LED Bias vs Scope Output

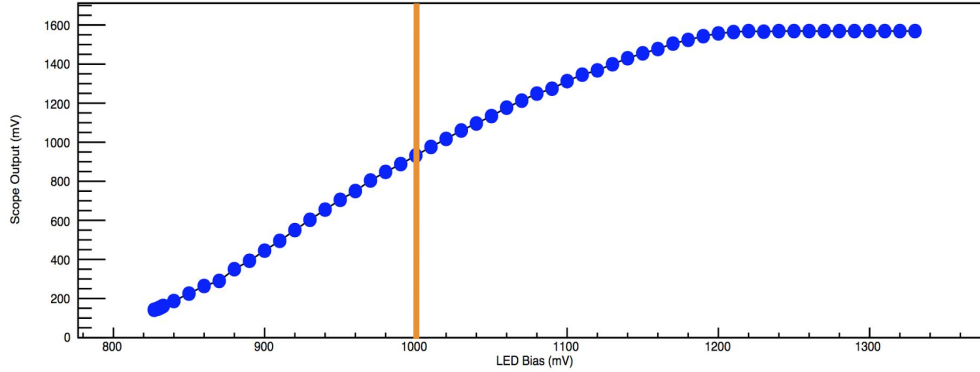


Scope Output Rate of Increase Per Step in VBias

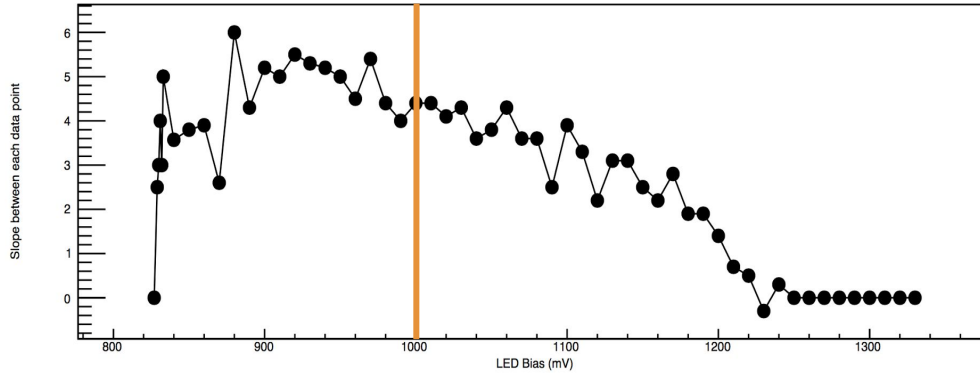


Low Gain: 1000 mV

Extended Low Gain: LED Bias vs Scope Output



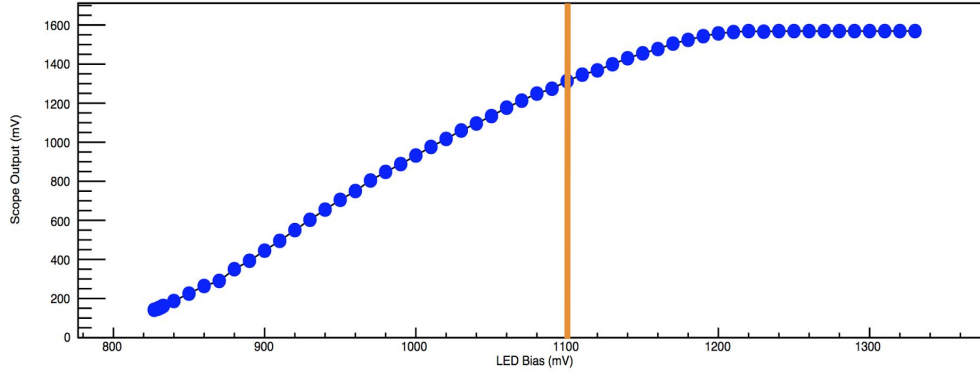
Scope Output Rate of Increase Per Step in VBias



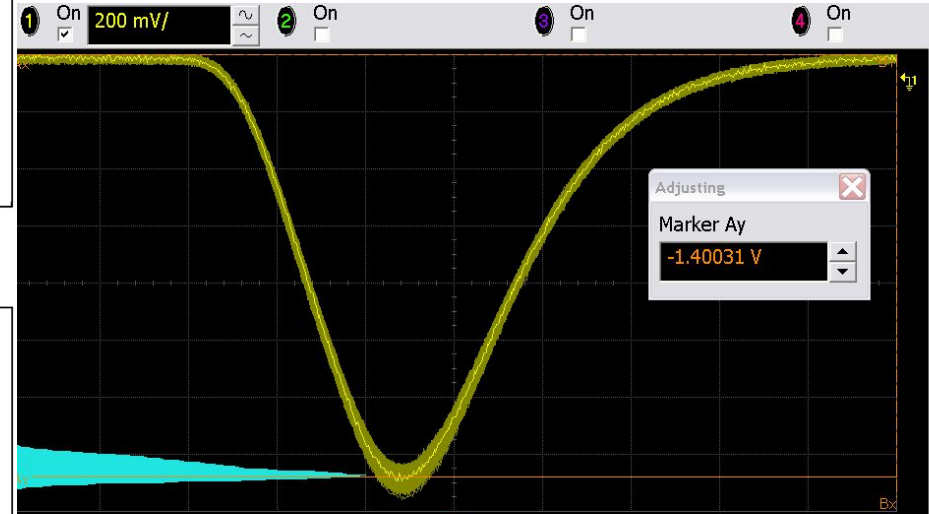
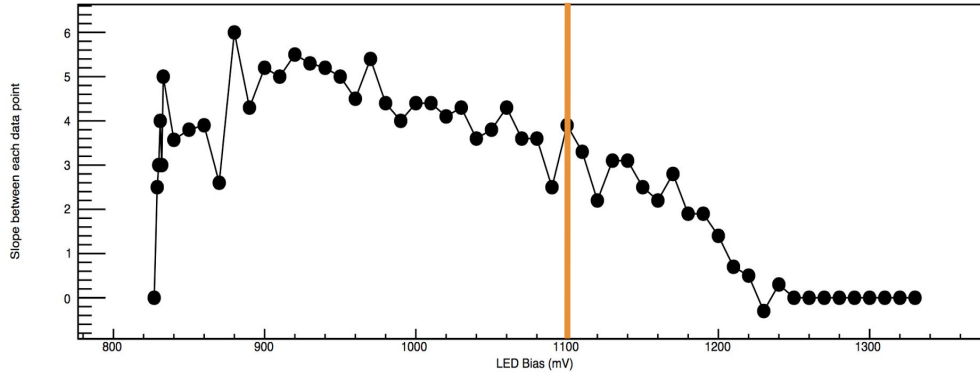
Note that I had to change the scale on the voltage to fit the whole pulse in the window

Low Gain: 1100 mV

Extended Low Gain: LED Bias vs Scope Output

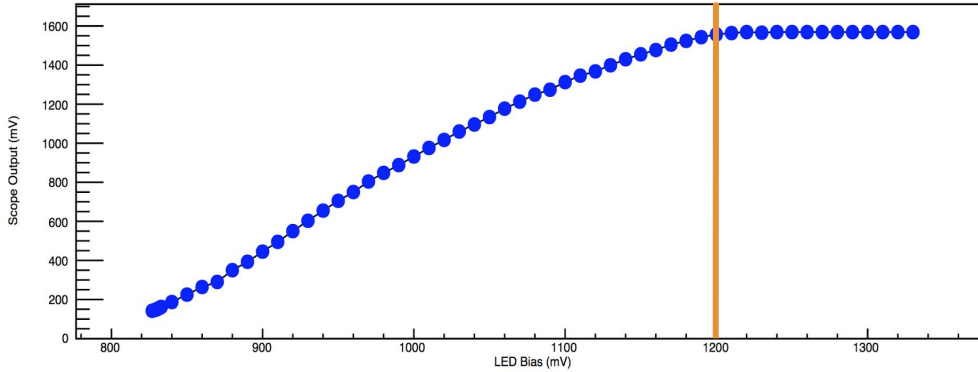


Scope Output Rate of Increase Per Step in VBias

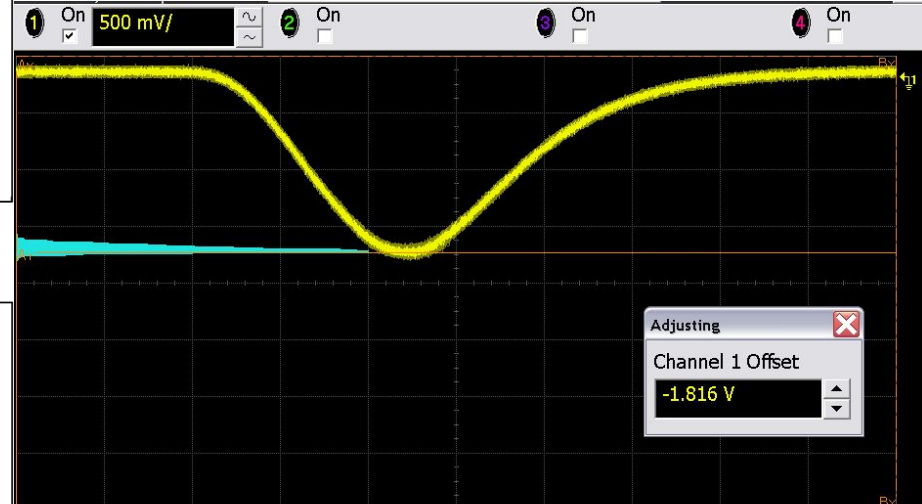
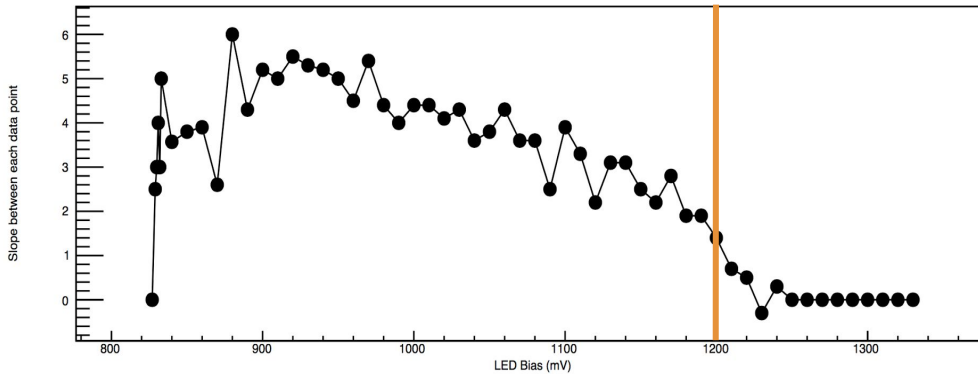


Low Gain: Saturation 1200 mV

Extended Low Gain: LED Bias vs Scope Output



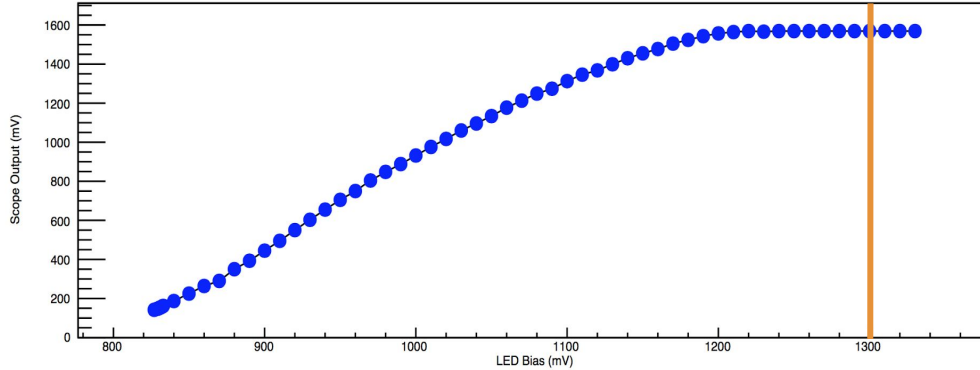
Scope Output Rate of Increase Per Step in VBias



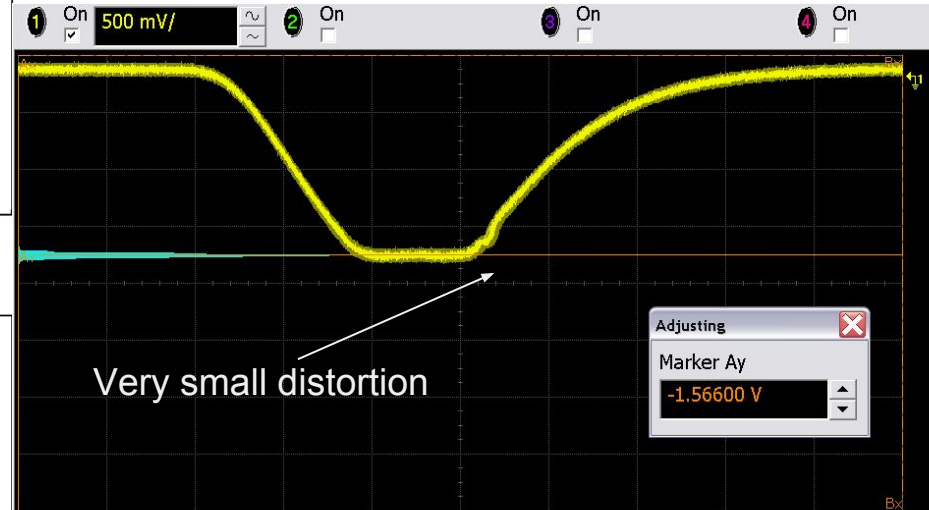
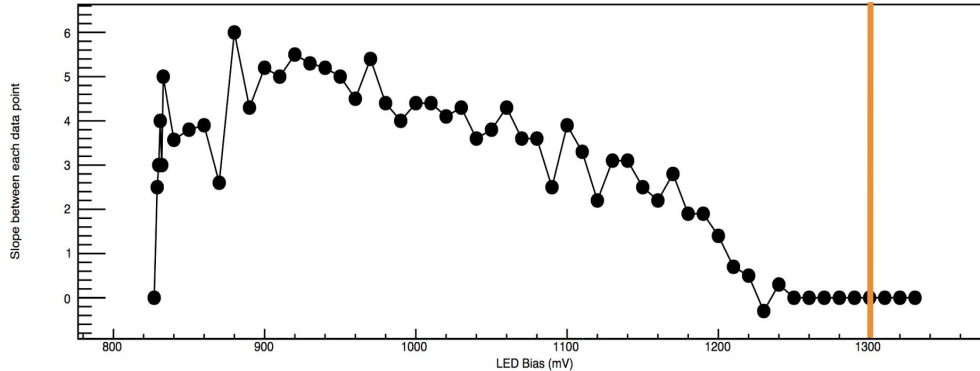
Note that I had to change the scale on the voltage to fit the whole pulse in the window

Low Gain: Total Saturation 1300 mV

Extended Low Gain: LED Bias vs Scope Output



Scope Output Rate of Increase Per Step in VBias



A cursory analysis of this data shows that the wave distortion we were seeing in the high gain setting is not present in the low gain read out.